

## Product Change Notice

PCN1002 (v1.0) April 22, 2010

### Overview

This notice describes the changes to the ARINC 429 Differential Line Driver Die for the HI-3185PSx & HI-3185PSx-N.

### Description

The new design has been characterized against all requirements of the ARINC 429 specification and the Holt HI-3185PSx & HI-3185PSx-N Data Sheet. No changes are necessary to the data sheet to accommodate the new die. This change is therefore considered a Form, Fit and Function replacement for the existing Holt product.

- Die Change 3182 Rev. K , 75 x 130 mils, to 3189 Rev. F, 78 x 160 mils
- Process Technology Change from 4.0um CMOS one layer metal to 4.0um CMOS two layer metal
- Package DAP size from 90 x 150 mil to 90 x 200 mil

The 14-Lead SOIC-NB package assembly is fully qualified at the CEI, Thailand location. CEI, Thailand has been a qualified supplier of Holt plastic parts for over 10 years and is ISO/ TS 16949 certified.

The 4.0um CMOS 2 layer metal semiconductor process is fully qualified at DALSA, Quebec. (See Qualification Data in Table 2) Dalsa, Quebec has been a qualified supplier of Holt wafers for over 10 years is ISO/ TS 16949 certified.

There is no change to Quality or Reliability of these devices. Holt has made a thorough analysis to assure 100% compatibility with the previous die revision.

### Reason

The 3182 Die has been redesigned to provide enhanced features and package options to customers and to simplify the production flow by reducing the number of revisions.

### Products Affected

Table 1 summarizes the products affected by this PCN. All parts listed are affected by this change.

*Table 1: Products Affected*

HI-3185PSI	HI-3185PSIF	HI-3185PST	HI-3185PSTF
HI-3185PSI-N	HI-3185PSIF-N	HI-3185PST-N	HI-3185PSTF-N

### Traceability

A Date Code facilitates package traceability. Parts from Table 1 can be shipped with a Date Code of 1010 or later, beginning June 22, 2010. Product from either die type can be shipped until inventory depletion.

### Qualification Data

Reliability Test	Requirement	Results
		QR-1017 Rev 1.0 & QR-1018 Rev 1.0 14L-SOIC, 3189
Device Characterization	Final Test yield analysis over -55°C and +125°C temperature extremes.	225/0
HTOL	1000 hrs @ 125°C	45/0
Latch Up	JEDEC – Class I, Level A	6/0
ESD-HBM	JEDEC -Class 2	9/0
Lightning - RTCA DO-160F Section 22	A3XXX Level 3 Waveform 3 & 4	2/0
	B3XXX Level 3 Waveform 3 & 5A	2/0
	Z3XXX Level 3 Waveform 3 & 5B	2/0
Precondition (PC)	MSL 1	11/0
PC + HAST	96 hrs	45/0
PC + Autoclave	96 hrs	45/0
PC + Temp Cycle	1000 cycles	45/0
PC + HTS	1000 hrs	45/0

## Response

**Note:** In accordance with JESD46-C, this change is deemed accepted by the customer if no acknowledgement is received within 30 days from this notice.

No response is required. For additional information or questions, please contact:

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## Additional Documentation

Below is a list of documents that are associated with this notice:

- QR-0844 Rev 1.0 HI-3189 Die Qualification
- QR-1017 Rev 1.0 HI-3185PSx Product Qualification
- QR-1018 Rev 1.0 HI-3185PSx-N Product Qualification

## Revision History

The following table shows the revision history for this document.

Date	Version	Revision Description
4/22/10	1.0	Initial Release